

Appln No. 10/040,456
Amdt. Dated December 12, 2003
Reply to Office action of October 21, 2003

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REMARKS/ARGUMENTS

GENERAL

Drawing objections

With reference to the drawing objections Applicant respectfully submits that all of the features of claim 3 are shown in the drawings, see for example the features 116 and 114 in Figure 10. Claim 3 does not recite a concave or convex base.

Claims 4 and 5 have been deleted.

Claim suggestions

Regarding the preamble to claim 1, the Examiner's suggestion has been adopted.

Regarding the term "plan view" in claim 2, Applicant contends that the term refers to the direction from which the wafer should be viewed and respectfully submits that the term "plan view" as used in the claim would be well understood by the skilled addressee. For reference to this term in the specification, see for example page 5, line 28 and Figure 11.

Claim rejections

Claims 1 to 6 stand rejected under 35 USC 102(b) as being unpatentable over Salatino (US Pat. No. 5,915,168).

Applicant provides herein reasons as to why Applicant believes the present claims are distinguished from Salatino. Applicant has also proposed new claims.

Present claim 1 has been amended as suggested by the Examiner to include a preamble. Claim 1 as amended defines apparatus comprising a pair of molds each having a working face, and each having a recess formed in the working face. The claim further defines that when the working faces of each of the pair of molds are brought into contact with each other, a cavity is formed. Claim 1 as amended now recites that the cavity is adapted to receive the thermoplastic material therein.

By contrast, Salatino teaches a method of forming protective covers *in situ*. That is, the lower wafer is the wafer into which the devices to be protected are incorporated. The lower wafer is therefore not a mold as that term is used in the context of the present application.

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The capping structure is formed by an etching process in an insulating layer 262 provided on an upper wafer 261. There is no disclosure of the upper wafer providing a mold as that term is used in the context of the present application. There is also no disclosure in Salatino of the upper and lower wafers coming together at working faces to define a cavity which can receive the thermoplastic material for forming the thermoplastic material into the microstructure. The cavity defined when the upper and lower wafers of Salatino are brought into contact is the cavity in which the microelectronic devices are disposed and is therefore unable to receive a thermoplastic material to be formed into a microstructure (see in particular Figure 3 and the associated description).

Examiner's comments regarding the intended use of the claimed device are noted. However, the language of claim 1 is quite explicit that the apparatus comprises a pair of molds. Salatino does not teach or suggest that the wafers disclosed in Salatino could be used as molds for forming an array of microstructures from a thermoplastic material. With respect, it is a far step and an unobvious step to suggest that the wafer structure taught by Salatino could be used as a mold for forming a protective structure from a thermoplastic material because the cavity 241 formed between the upper and lower wafers is wholly unsuitable for providing any form of microstructure. Furthermore, the provision of thermoplastic material into the cavity 241 would encapsulate the air bridge device 242 disposed in the cavity 241 rendering it useless. Similarly, if thermoplastic material was provided into the cavity 248 it would completely cover the contact pad 250, again rendering that device inoperative.

Because Salatino fails to disclose or suggest essential features of the invention as presently claimed in claim 1, it is respectfully submitted that claim 1 as defined is patentably distinguished from Salatino. Furthermore, as each of the dependent claims includes all of the limitations of the claim 1, it is respectfully submitted that claims 2, 3 and 6 are patentably distinguished from Salatino.

Applicant has presented new claims 7 to 9. Each of these claims includes the limitation that the cavity formed when the pair of molds are brought into contact at their working faces has the shape of the microstructure to be formed by the thermoplastic material and that the cavity is adapted to receive the thermoplastic material for forming the microstructure shape. These limitations are neither taught nor suggested by Salatino and therefore it is respectfully

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submitted that these claims are patentably distinguished from Salatino.

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Summary

Applicant submits that the amendments and remarks made herein are fully responsive to the issues raised in the Office Action. In light of the amendments made herein and the above comments, it is respectfully submitted that the claims are in order for allowance and reconsideration of the application is respectfully requested.

Very respectfully,

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